

Johannes Behr

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johannes.behr@igd.fraunhofer.de





Web is the **preferred** application-**platform** of the future

(X)3D-**Client** Technology will be **part of HTML** (right now through **x3dom**)

Costly application creation and deployment process. Two categories:

Build on heavy **human-resources**

=> e.g. games with interactive tool-chain (e.g. Unity3D)

Automated process

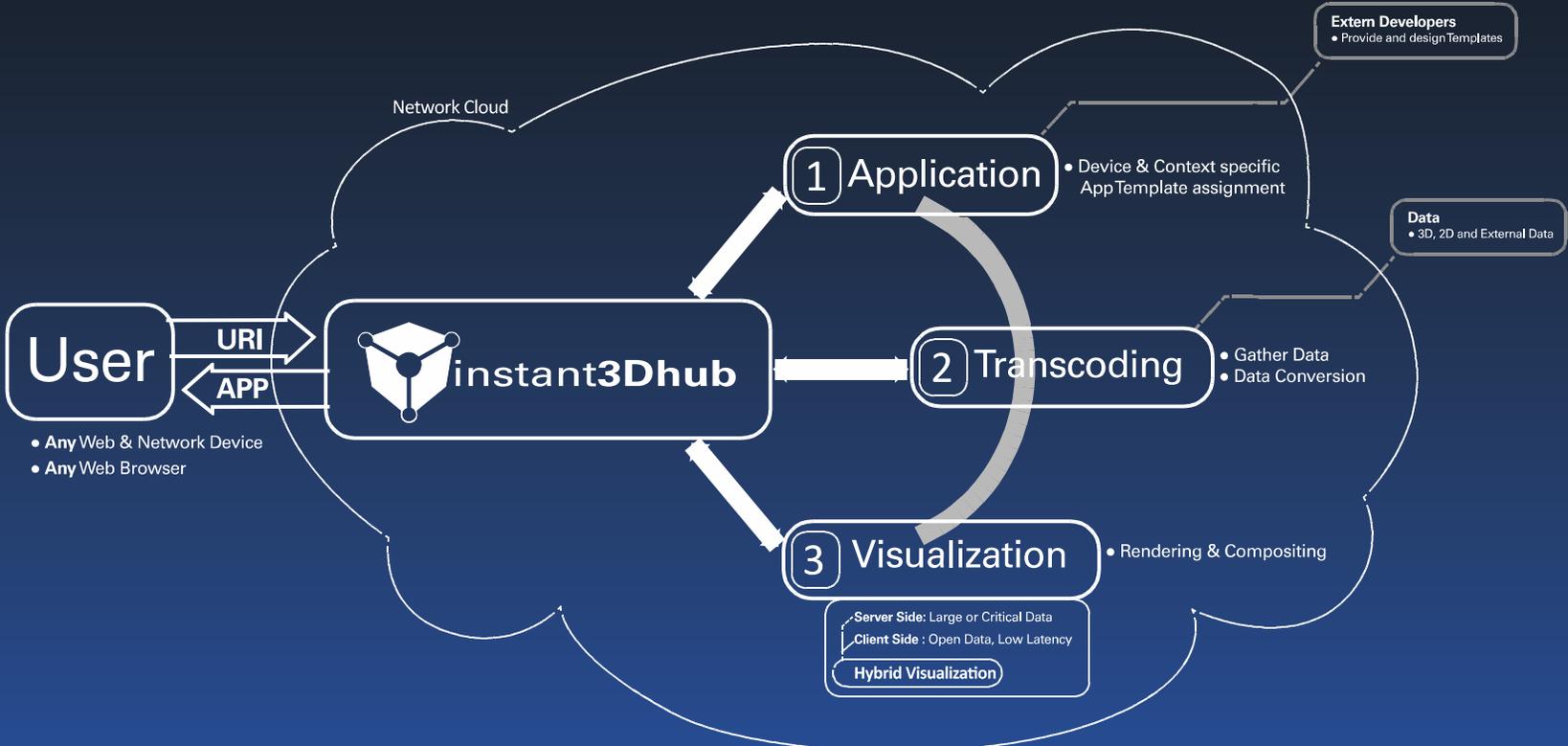
Application provider

Data transcoding

Client/Server or even Hybrid Rendering

Instant3D Hub

Service overview





Application identification with URI

„App-Service“ dispatches request from HUB and provides **App template**

Template includes

HTML-Pages

Meta-Information for data preparation

Data source container references

Data target format description
(e.g. X3D, Web3D/ISO Standard)

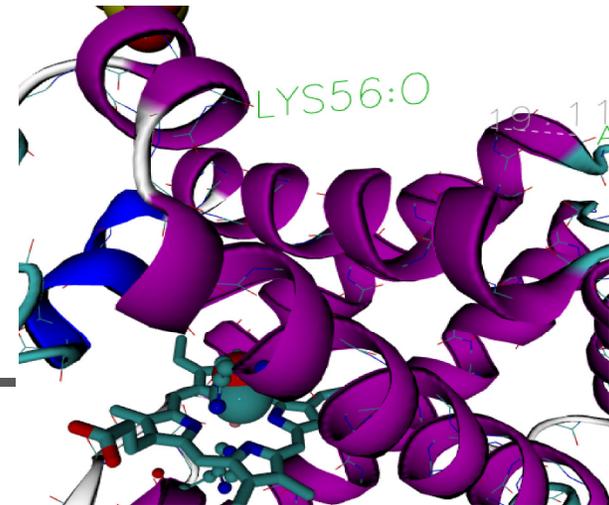




Template defines the properties of the application and data

HUB discovers and utilizes "**Transcoder**"-**Service** for conducting the concrete

Data (e.g. X3D with cams)



„**Transcoder**"-**Service** converts and „caches“ 3D data from existing resource (e.g. 3D converter). Provides instantly a new URI as reference to 1-n results. (Simple **ready (200)**, **not-yet (202)**,

Instant3D Hub

Visualisation



HUB creates **final application** depending on the context, security aspects and “browser”-capabilities. App uses **single API-Layer** to access local/remote graph.



Client-Side Rendering / Graph in Browser

X3DOM (WebGL/Flash11) in HTML

Server-Side Rendering / Graph in Hub

Uses standard X3D Runtime environment (e.g IR-Player) and streams MJPEG

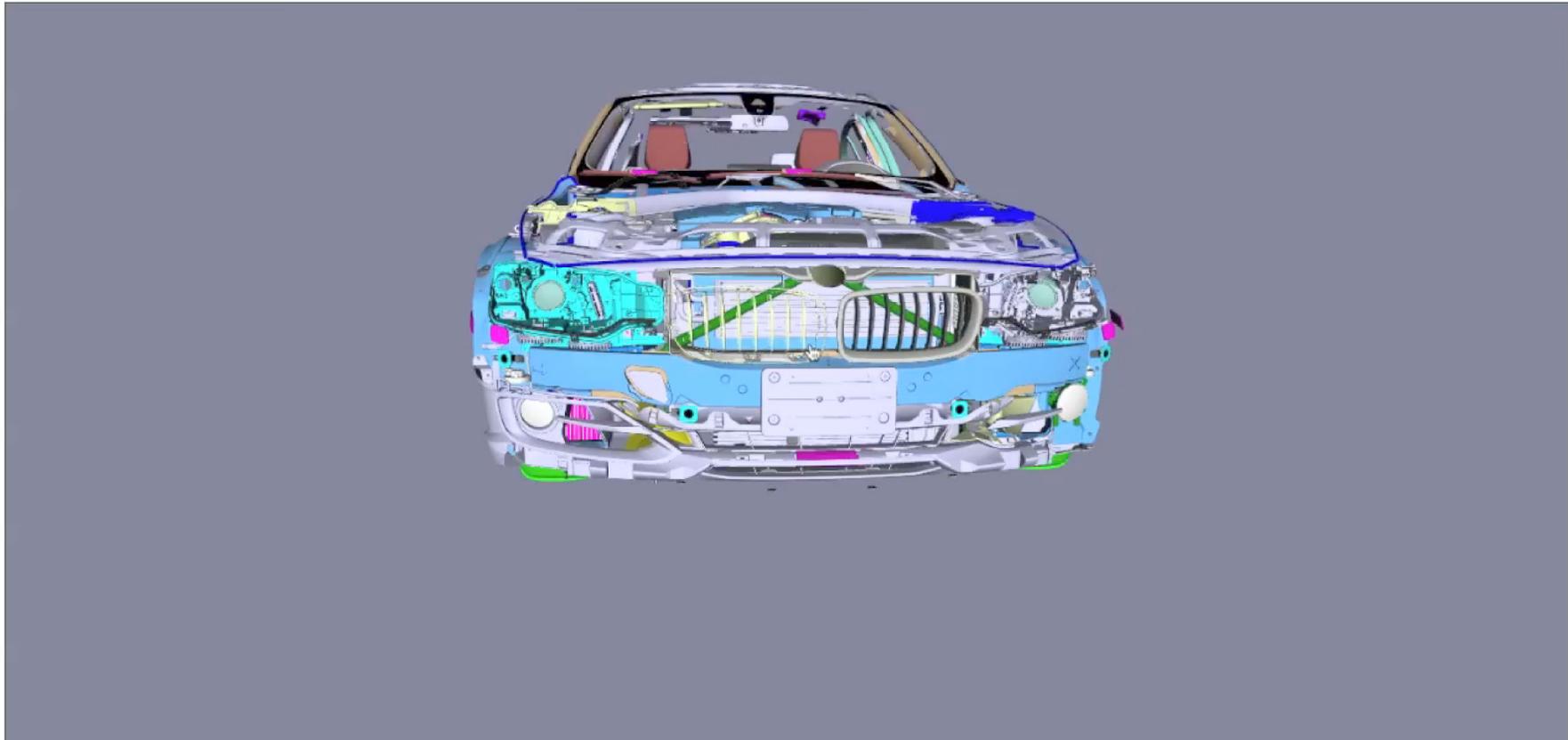
Example: 80 Million Polygon Model

Hybrid rendering approach: "Out of Browser"



"Out of Browser" based Rendering; Using the X3DOM BinaryGeometry Container

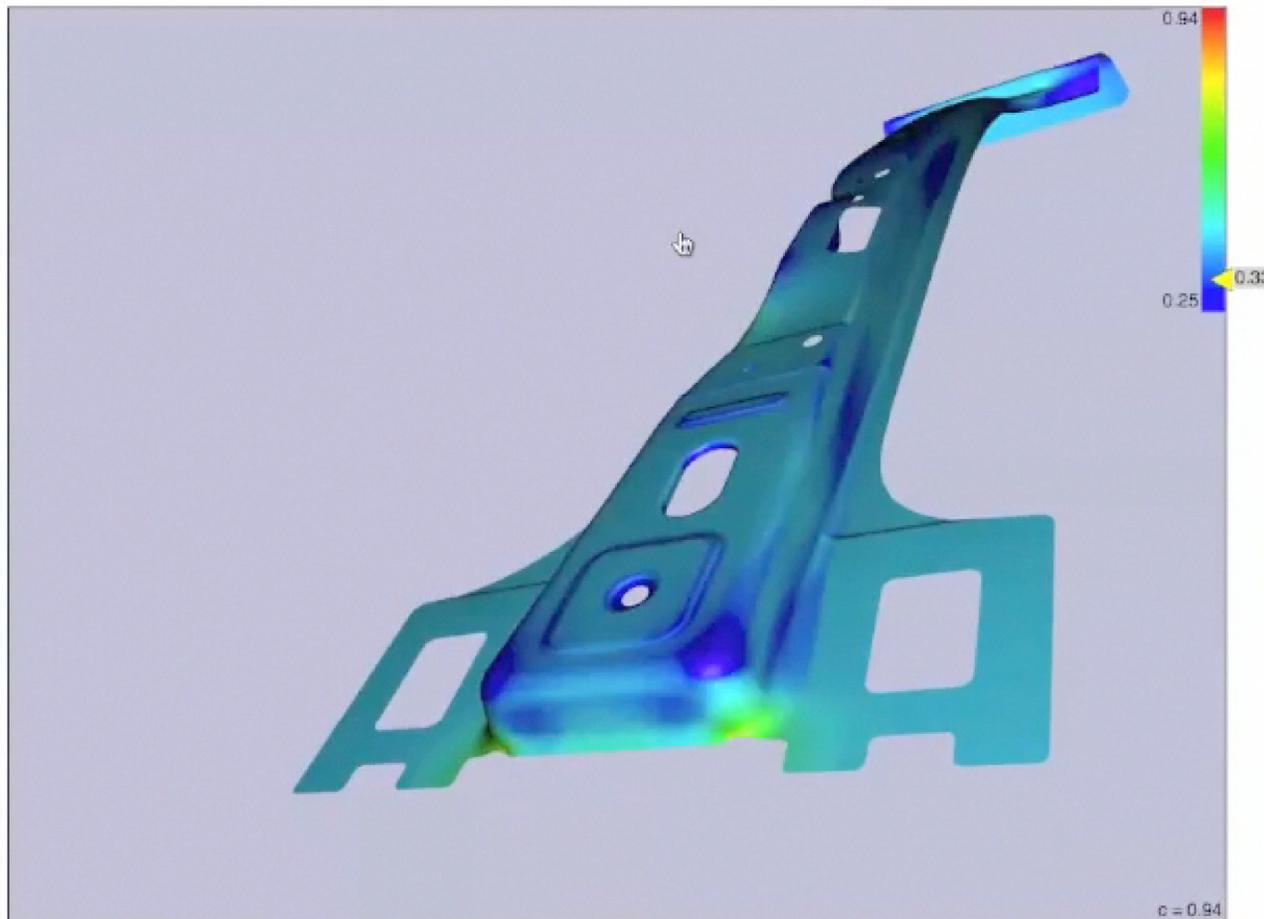
BMW F30, 80 Million Polygon Model



Example: Simulation results



UI elements to explore data-elements as part of the
temp



Choose transferfunction window with slider:

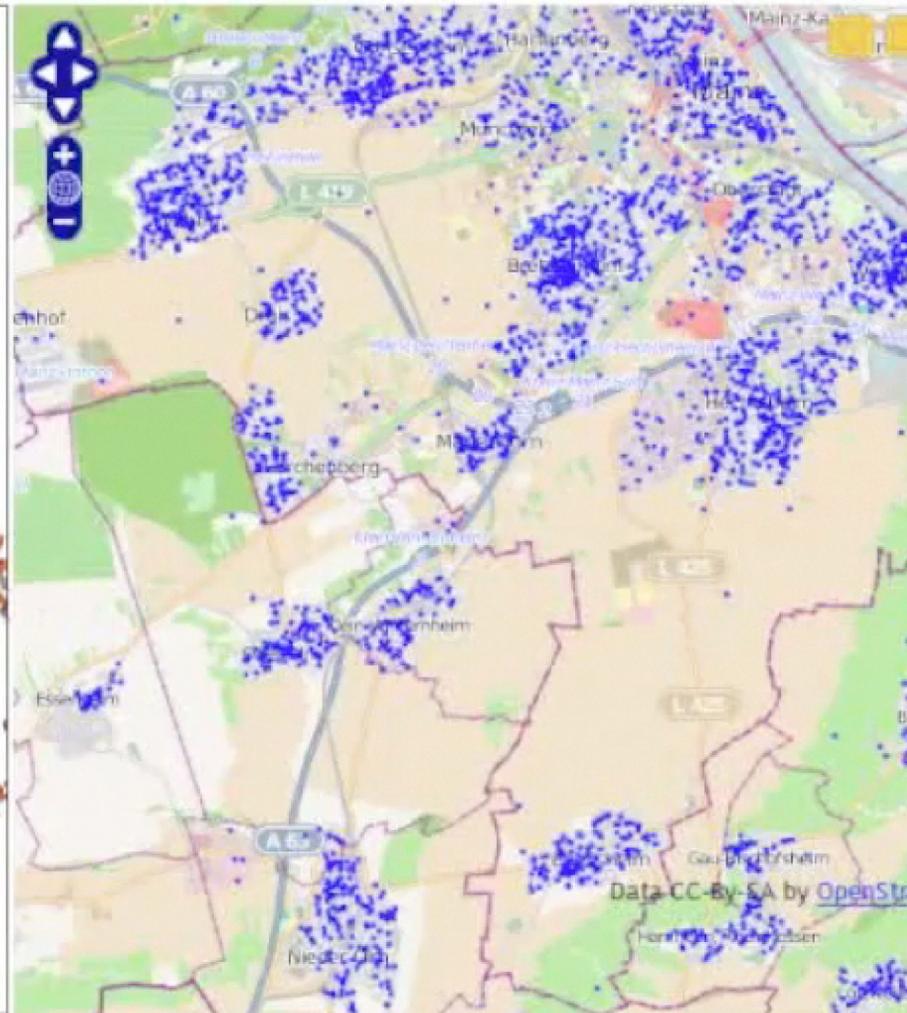


Choose scalar threshold c with slider:



Example: GIS Application

2D/3D mash-up for city-planner



Example: Virtual Expedition

Virtual Object from 3D Scanner Data



Death as a drummer

Place of origin
Germany (northern, made)

Date
ca. 1670-1680 (made)

Artist/Maker
Henne, Joachim (probably, artist)

Materials/Technique
Carved elephant ivory

Museum number
2582-1856

Gallery location
Sculpture, room 111, case 9



Example: Architecture Walkthrough

Building variants from construction data

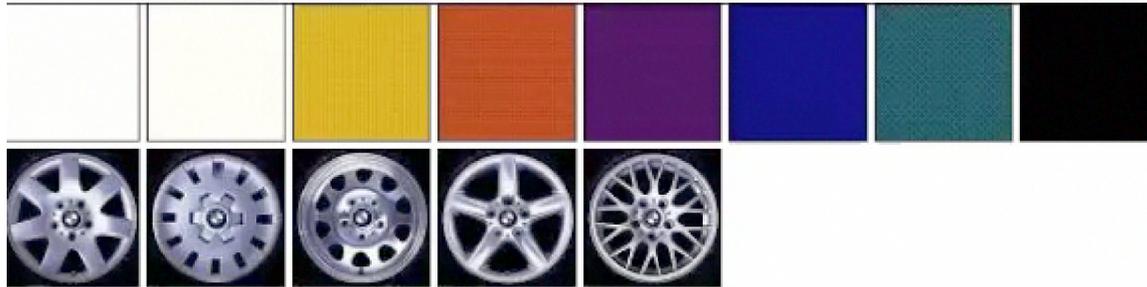


The Fair of Frankfurt / Hall Eleven



Example: Marketing

Online-Configurator form construction data





Demo!

<http://www.igd.fraunhofer.de/vcst>